

NEUROPTEROID INSECTS FROM NEW MEXICO.

BY NATHAN BANKS.

A list of the Neuropteroid insects of any State or Territory must be more or less incomplete, since these insects are but little collected and our knowledge of these forms is yet comparatively slight.

The insects represented in the following list were collected almost wholly by Prof. Cockerell, or those associated with him. But New Mexico is such a large region, of such varied topography, that these insects, gathered from but a few localities, are but a small portion of the species that must exist in the Territory. Incomplete as this enumeration must now be, it is larger than can be made of many States, and exhibits several interesting facts. Prominent among such facts is the great preponderance of true Neuroptera. More species of Neuroptera are already known from New Mexico than can be collected in many eastern States. The Mecaptera, so far, are not present. The Trichoptera are not as numerous as in the East; but of these the Rhyacophilidæ are in larger proportion than usual. The Perlidæ all come from the northern part and are similar to those of Colorado. Although the northern and mountain parts of New Mexico have a fauna similar to Colorado, yet I suspect, judging from this collection, that in many regions where northern forms are predominant there are some species of the Mexican fauna. In other words, the faunas characteristic of certain altitudes, owing to their proximity, more or less intermingle. The faunas are not as distinct as if they were separated by latitude instead of altitude. I am aware that this is not the opinion of many who visit the region, but it is borne out by all collections that I have examined. I think the collector, seeing these different faunas so close together, is impressed too deeply by the contrast.

In this list there is a total of 97 species, of which 12 are new and here described. A description is also given of an ant-lion fly previously only known from Hagen's description of 1861.

The proportion of species in the various groups may be seen from the following table:

Perlidæ	13
Termitidæ	3
Psocidæ	4
Epheméridæ	6
Archiptera	26

Sialidæ	1	
Raphididæ	1	
Mantispidæ	2	
Coniopterygidæ	1	
Hemerobiidæ	11	
Chrysopidæ	15	
Myrmeleonidæ	20	
Neuroptera		51
Limnephilidæ	8	
Rhyacophilidæ	5	
Sericostomatidæ	1	
Hydroptilidæ	1	
Hydropsychidæ	4	
Leptoceridæ	1	
Trichoptera		20
Total		97

Order ARCHIPTERA.

Suborder PLECOPTERA

Family PERLIDÆ

Acroneuria nigrita n. sp.—Black; head rather yellowish; antennæ brown; pronotum brown, a pale stripe in middle; thorax shining black, abdomen dull black; legs and setæ brown; wings with blackish veins. Pronotum in front about as wide as head, narrowed behind, sides straight, surface moderately rugose. Venation about as usual, but there are not as many branches of the radial sector beyond anastomosis as in other species (although this is variable). Ventral plate of female with a long deeply incised mark at tip, not seen in other forms. Length 21 mm.; expanse 54 mm.

Two females from Pecos, June (Cockerell). One micropterous male from the same locality probably belongs to this species, but is much smaller.

Pteronarcella badia Hagen.

Four specimens from Pecos, June (Cockerell).

Isogenus elongatus Hagen (?).

One female of an *Isogenus* which does not appear to differ from this species, Pecos, June.

Perlinella ebria Hagen.

From Las Vegas, June (Cockerell).

Perlinella frontalis Banks.

One from Beulah, May 30th (Cockerell).

Chloroperla 5-punctata Banks.

From Beulah, July 3d, and Las Vegas, June 9th (Cockerell).

Chloroperla coloradensis Banks.

From Beulah, July 11th (Cockerell); and Carriage House, Gallinas Canon, July 4th (Miss F. Beschle).

Chloroperla pallidula n. sp.—Pale yellowish; wings pale greenish; eyes, ocelli, margin of pronotum, posterior margin of meso- and metascutellum black; venation pale. Form rather elongate, pronotum as broad as head, anterior margin nearly straight, sides rounded, but tapering behind. Wings narrow, very few cross-veins; pedicel to fork of radial sector nearly as long as fork. Length 5 mm.; expanse 15 mm.

One specimen from Beulah, end of August (Cockerell).

Chloroperla signata Banks.

Two specimens of this well marked species from Pecos, June (Cockerell).

Capnia sp.

One specimen from Las Vegas (Cockerell). Related to *O. vernalis*, but probably new.

Nemoura coloradensis Banks.

From Beulah, 8000 feet, and from top of range between the Sapello and Pecos Rivers, August 2d, 11,000 feet (Cockerell).

Nemoura cinctipes Banks.

One specimen from Beulah, May 3d (W. P. Cockerell).

Nemoura sp.

A rather large specimen of an undescribed species from East Las Vegas. I have the same species from Colorado. It has a large swollen plate at tip of the body.

Tænipteryx sp.

One male from Las Vegas, March; very close to *T. pacifica*, but probably a different species.

Suborder ISOPTERA.

Family TERMITIDÆ.

Termopsis angusticollis Walk.

Specimens from Mesilla, June 28th (Cockerell); also recorded by Townsend, Zoe, vol. iv, p. 135 (1893).

Calotermes marginipennis Hagen.

Males from Mesilla (Morse), and Albuquerque, Nov.—Dec. (Cockerell).

Termes lucifugus Rossi.

Males from Las Vegas, March (Cockerell).

Suborder CORRODENTIA.

Family PSOCIDÆ.

Psocus cockerelli n. sp.—Head pale yellow, a median shining brown spot over the ocelli, a brown patch each side toward eye, and four brown patches on nasus, one near each corner; the nasus indistinctly brown lined, the labrum margined with brown. Basal joints of antennæ yellow, beyond brown; palpi yellow, last joint brown. Thorax pale yellow; a large spot on each lateral lobe of mesothorax and two spots on the median lobe are shining black. Abdomen brown, with some white markings. Legs yellow, the tarsi brown, and the femora with brown spots. Wings hyaline; venation brown, except the veins are white at bases, and the cubitus is white throughout, the cross-vein closing the discal cell and extending down to posterior margin and on the upper branch of the median vein is white; the lower branch of radial sector is also white at base. Pterostigma white, with a large black spot in posterior part; a brown spot at tip of anal vein. The nasus is large, subquadrangular, with about twelve vertical rows of short white hairs. Antennæ slender, hairy; reaching beyond tip of thorax. Eyes small and spherical, but rather prominent. The discal cell is very much longer than broad at base, and much narrowed toward tip; it reaches the radial sector (thus no anterior cross-vein).

From Whitewater, by White Sands, on aster, October 6th (Cockerell). A very handsome and distinct species.

Psocus trifasciatus Prov.

Prof. Cockerell collected some at Dripping Springs, Organ Mts., August 20th.

Psocus oregonus Banks.

Mr. Schwarz took some from Las Vegas Hot Springs, Aug. 13–17.

Psocus sp.

One specimen of a dark-winged species from Beulah; it is very close to *Ps. sparsus*, but I think different.

Suborder ANISOPTERA.

Family EPHEMERIDÆ.

Hexagenia limbata.

One specimen from Roswell, August (Cockerell).

Ephemerella grandis Eaton.

One from Beulah (W. P. Cockerell).

Choroterpes inornata Eaton.

One from Las Vegas (Oslar). Described from Mexico and Arizona.

Callibaetis undata Pictet.

Several specimens from Beulah, Sept., in spider's web (Cockerell); and Las Vegas Hot Springs, August 2-19 (Schwarz and Barber).

Cleon sp.

Specimens from Las Vegas Hot Springs, August 2-9 (Schwarz and Barber).

Heptagenia longimanus Eaton (?).

Several specimens which agree fairly well with Eaton's description come from Sapello Canon, July 27th (Oslar); and Beulah, July (Cockerell).

Order **NEUROPTERA.**Suborder **MEGALOPTERA.**Family **SIALIDÆ.****Corydalis cognata** Hagen.

Recorded from Pecos River, western Texas (now New Mexico). I have it from Arizona.

Family **RAPHIDIDÆ.****Raphidia minuta** Banks.

One from Beulah, August 13th (Cockerell).

Suborder **STEGOPTERA.**Family **MANTISPIDÆ.****Mantispa brunnea** Say.

One from Rio Ruidoso, White Mountains, 8500 feet, August 6th (Townsend).

Mantispa interrupta Say.

From Las Vegas Hot Springs, Aug. 8-13 (Schwarz and Barber).

Family **CONIOPTERYGIDÆ.****Coniopteryx** sp.

A species of this genus was taken by Mr. Schwarz at Las Vegas Hot Springs, August 5th.

Family HEMEROBIIDÆ.

Megalomus moestus Banks.

Two from Santa Fé, July, August (Cockerell).

Megalomus latus Banks.

From Beulah, July (Cockerell); Las Vegas Hot Springs, August 6th (Schwarz and Barber), and Pecos, August 12 (Cockerell).

Micromus variolosus Hagen.

Several from Las Vegas (Cockerell); Las Vegas Hot Springs, August 2-8 (Schwarz and Barber), and Pecos, June.

Micromus montanus Steph.

One specimen from Beulah, July 27th (Cockerell).

Hemerobius pacificus Banks.

Several specimens from Santa Fé, August (Cockerell), and Las Vegas Hot Springs, August 11th (Schwarz and Barber).

Hemerobius moestus Banks.

Two from Las Vegas Hot Springs, Aug. 5-9 (Schwarz and Barber).

Hemerobius cockerelli Banks.

Top of Las Vegas Range (Cockerell); Las Vegas Hot Springs, August 6th (Schwarz and Barber).

Hemerobius schwarzi Banks.

One from Mesilla (Morse).

Hemerobius umbratus Banks.

One from Albuquerque (Osler).

Hemerobius perparvus McLachlan.

Various specimens from Mesilla (Cockerell), and Las Vegas Hot Springs, August 5th (Schwarz and Barber).

Hemerobius angustus n. sp.—Body brownish throughout, antennæ similar, the legs pale yellowish. Wings faintly clouded, venation dark brown, but the longitudinal veins, especially in the middle of the wings, are dotted with pale. The cubital vein broadly brown, and some of the anal veins and along the anal margin also broadly brown; the costal venation wholly brown; some pale spots along outer and posterior margins of wings. Hind wings hyaline, faintly clouded along posterior margins, and at the pterostigma; the venation brownish, the costals darker. Fore wings rather long and narrow, the costal region narrow at base; first branch of radius connected back to radius before origin of second branch. In the hind wings the radial sector at base is connected back to radius to form a small closed cell near base of wing. Length 5 mm.; expanse 10 mm.

One specimen from Mesilla, N. Mex. (Morse), and others from Las Vegas Hot Springs, August (Barber and Schwarz). In National Museum collection.

Family CHRYSOPIDÆ.

Chrysopa oculata Say.

Several specimens from Beulah, July 25th (Cockerell); Rio Ruidoso, White Mts., 6500 feet, August 1st (Townsend); Santa Fé, 7000 feet, July (Boyle).

Chrysopa chlorophana Burm.

A few specimens: Beulah, 8000 feet (Cockerell); Pecos, June; Sapello Canon, July 27th (Osler); and Las Vegas Hot Springs, August 11th.

Chrysopa schwarzi Banks.

Type is from Las Vegas Hot Springs, August 8th (Barber and Schwarz).

Chrysopa coloradensis Banks.

From Santa Fé, July (Cockerell); one specimen.

Chrysopa erythrocephala Banks.

Several specimens from Mesilla, July 18th (at light) (Cockerell); and Albuquerque, July 13th, and Gallinas Canon, July 24th (Osler).

Chrysopa cockerelli Banks.

One specimen from East Las Vegas (Cockerell).

Chrysopa rufilabris Burm.

Several specimens from Gallinas Canon, July 25th (Osler); and Mesilla (Morse).

Chrysopa sabulosa Banks.

One specimen from Mescalera, October 1st; one from Spark's Ranch, Pecos Canon, July 27th, 7500 feet (Cockerell).

Chrysopa chi Fitch.

One specimen from Pecos, June 19th; agrees with eastern specimens throughout.

Chrysopa plorabunda Fitch.

Specimens from Albuquerque, September; Pecos, June 30th; and Spark's Ranch, Pecos Canon, July 27th, 7500 feet (Cockerell).

Chrysopa arizonensis Banks.

A few specimens from Gallinas Canon, July 25th (Oslar).

Chrysopa externa Hagen.

Various specimens from Las Cruces, 3800 feet, June 8th, and Santa Fé, July (Cockerell); and Mesilla.

Meleoma mexicana Banks.

One from Santa Fé, July (Cockerell), also from Las Vegas Hot Springs, August 9th (Schwarz and Barber).

Eremochrysa punctinervis McLach.

From Mesilla and San Augustine (Cockerell). Common species in the arid regions of the Southwest.

Eremochrysa fraterna Banks.

One specimen of this uncommon species from Pecos, August 13th. Prof. Cockerell states that the markings are of a lilac color in life.

Family MYRMELEONIDÆ.

Acanthaclisis hageni Banks.

From Albuquerque, July (Oslar).

Brachynemurus tenuis Banks.

Three from Mesilla, June 30th (Morse).

Brachynemurus tuberculatus Banks.

One, the type, from Mesilla, June 30th (Morse).

Brachynemurus longipalpis Hagen.

From Albuquerque (Oslar).

Brachynemurus nigrilabris Hagen.

Many specimens from Las Vegas, July (Oslar); and Mesilla Park, September 13th, at light (Cockerell).

Brachynemurus abdominalis Say.

From Las Vegas, July 1 (Oslar).

Brachynemurus ferox Walker.

One from Albuquerque (Oslar).

Brachynemurus pusillus Currie.

One from Mesilla Park, September 16th (Cockerell). This species is remarkable on account of its very large bristles.

Brachynemurus hubbardi Currie.

From Lone Mts., July (Cockerell), and near La Luz, Aug. 23d (Townsend).

Brachynemurus blandus Hagen.

From Albuquerque, July 12th (Oslar); a few specimens.

Brachynemurus texanus Banks.

Two specimens from Albuquerque (Oslar). Two specimens from Phoenix, Arizona, labelled by Mr. Currie as his *B. intermedius*, are in my collection and appear to be the same species. The New Mexico specimens are smaller than the others.

Brachynemurus versutus Walker.

One specimen from mouth of Sapello Canyon, September (Cockerell), and two from Pecos, August 30th (Cockerell). This Mexican species has not previously been recorded from the United States; but I have also specimens from Colorado.

Brachynemurus elongatus n. sp.—Face yellowish; a brown inter-antennal mark, slightly concave below, two nearly parallel brown bands on vertex, the posterior one broken in the middle; palpi small, pale, last joint partly blackish; antennæ yellowish brown, reaching to tip of mesothorax. Prothorax with a broad brown stripe, each side separated by a narrow but distinct median yellow line, each brown stripe contains a pale spot near front end, and is incised from within at the middle; the side of pronotum has a narrow brown stripe, not reaching the front margin. Thorax mostly covered with brown, two brown stripes on scutellum, a pale dot on each anterior lateral lobe, and two pale stripes each side. Abdomen brown, paler at base above, with traces of a median brown line; last segment black, with a median yellow dot above; appendages dark, about one-fourth as long as last segment. Legs pale yellowish, dotted with brown; anterior tibiae on outside with brown bands, and some of tarsal joints are brown; clothed with some black and more white hairs. Wings hyaline, slightly marked with brown along the principal longitudinal veins and at the pterostigma, much as in *B. brunneus*, but not so heavily. Venation mostly brown, some cross-veins white. Wings more slender than *B. brunneus* and more acute at tips. Length, ♂, 47 mm.; expanse 50 mm.

Two males from Mesilla, June 30, 1897 (Morse). These are the two males I referred doubtfully to *B. centralis* (*brunneus*); but they are distinct from the male of that species by their longer abdomen; last segment longer, with shorter appendages, and the vertex is not so elevated as in that species.

Brachynemurus coquilletti Currie.

From Albuquerque, July 12th (Oslar).

Brachynemurus brunneus Currie.

Various specimens from Las Vegas, July (Oslar).

Brachynemurus sackeni Hagen.

A pair from Kin Kale Ranch, Pecos, June 23d, at light (Cockrell). It appears to be more common in Arizona.

Myrmeleon rusticus Hagen.

Several from Albuquerque, July (Oslar).

Myrmeleon immaculatus De Geer.

Specimens from Albuquerque (Oslar). They are of the form described by Mr. Currie as *M. immaculatus occidentalis*. They appear to vary a great deal in extent of markings. Some of the specimens are much smaller than the eastern ones.

Psammoleon ingeniosus Hagen.

Recorded by Hagen from the Territory. I have not seen it from New Mexico, but from Arizona.

Psammoleon inscriptus Hagen.

One specimen from Las Vegas (Oslar). This species has not been recorded since its description by Hagen in 1861, as from Western Texas, now New Mexico. I give below a fuller description.

Face yellowish; an interantennal mark extending up over the entire vertex, with a pale transverse line. Antennæ dark brown, reaching to base of fore wings. Pronotum dark brown, with a narrow median yellow line, and a short stripe each side and a spot in front; thorax nearly black, with yellow dots; one in front of each wing, two in front above, and behind are two pair and one median spot; metathorax not distinctly spotted; pleura more yellowish. Legs mostly dark, with white hair; anterior tibiæ have two pale bands; posterior tibiæ at base pale; spurs as long as first two joints (first joint very long), tarsi slender, posterior ones as long as tibiæ. Abdomen black, faintly marked with yellow at tips of segments. Wings scarcely hyaline, veins nearly all rather broadly marked with brown, some white veins; in certain light white patches toward the base; a flexuous, bi-incurved brown line from basal third of posterior margin to tip of wing. Pterostigma brown. Hind wings similarly marked, but less heavily, and without the flexuous line. Costal area of fore wings with a partial double row of cells (in my specimen). Seven cross-veins before origin of radial sector, and in hind wings but one. Length 26 mm.; expanse 56 mm.

It differs in many points from *Ps. ingeniosus*, particularly in the more slender tarsi, the denser venation, the partial double row of cells between anal and cubital veins in the forewings, and in the markings. Nevertheless, there is such a general affinity to that species that I am loath to erect a new genus for it; the more so as one form of *Ps. ingeniosus* (*sinuatus* Currie) has a similar line on the wings.

Order **TRICHOPTERA**Family **LIMNEPHILIDÆ**.**Limnephilus cockerelli** Banks.

Specimens from top of range between the Sapello and Pecos Rivers, August 2d, 11,000 feet; Top of Las Vegas Range; and Moro, June 28th (Cockerell).

Asynarchus costalis Banks.

From Las Vegas Range, June 28th (Cockerell).

Platyphylax designata Walker.

Various specimens from Beulah, 8000 feet, July 27th, August 16th; Chicorico Canon, near Raton, August 25th (Cockerell).

Dicosmœcus atripes Hagen.

Several specimens from San Ignacio, September 1st (Porter and Cockerell); and Sapello Canon, July 25th (Oslar).

Dicosmœcus maculatus n. sp. — Face reddish yellow, clothed with appressed hairs same color; vertex reddish, mostly with whitish hairs, some yellow in front; antennæ pale reddish brown, basal joint as long as length of head, ocelli of moderate size, posterior warts narrow, obliquely transverse; palpi yellowish; thorax pale reddish brown, with a paler, broad, median stripe, the latter clothed with yellowish hair. Prothoracic and mesothoracic lateral lobes with tufts of yellowish bristles; abdomen brown; legs dull reddish, with black spines and reddish spurs; spurs 1-3-4. Anterior wings brown, darker beyond anastomosis, costal area wholly pale, elsewhere (except anal region) with round pale spots, often confluent; slightly beyond anastomosis is a pale crescent across the apical cells, and in the distal part of the fourth apical is a pale streak; there are also two large pale patches, one covering the apex of the thyridial area and base of first subapical cell, and the other obliquely across thyridial area and cell; sometimes another pale spot near base; anterior veins to anastomosis pale yellow, others brown. The discal cell is shorter than in allied species, but little longer than its pedicel, not reaching near as far back as the thyridial cell; the first and fifth apical cells extend equally far back of anastomosis, otherwise venation is like *D. argus*, save that the radius is slightly more sinuate before the pterostigma. Hind wings hyaline, slightly clouded at tips and along costa, veins yellowish, venation like *D. argus*. Length 18 mm.; expanse 46 mm.

Described from two specimens, one from Pecos, N. Mex., August 24th (Cockerell), at light; the other from S. Arizona, August, 1902 (F. H. Snow).

Halesus minutus Banks.

Specimens come from Gallinas Canyon, July 29th (Oslar); Beulah, July 11th to 27th; and El Macha, July 21st (Cockerell). Many of the specimens are smaller than the types from Colorado.

Anabolina diversa Banks.

Specimens of this species were taken at Las Vegas, May 17th, at light (Cockerell). They are rather larger than the Arizona specimens.

Psilopteryx (?) brevipennis n. sp.—Pale yellowish; abdomen brownish above; venation brown. Clothed on head and thorax with whitish and yellowish hairs, longest on the prothorax above; wings sparsely hairy along the veins, as well as on the margins. Head rather broad, slightly depressed in middle of vertex, ocelli small, two transverse posterior warts; face retreating; basal joint of antennæ moderately large. Prothorax distinct from above, about four times as broad as long. Legs of moderate size, with many black spines; spurs (♀) 1-3-4, yellowish. Wings (♀) short; anterior pair not reaching tip, and posterior pair scarcely extending beyond middle of abdomen; the former broad and broadly rounded at tip, the latter much narrower and acute at tip; discal cell triangular, reaching nearly half-way to base, fifth apical cell narrow at base. Abdomen large, largest toward tip. Length 8 mm.

One female from Beulah, 8000 feet (Cockerell). It is not a *Psilopteryx* as that genus is now defined. However, by shape of wing, unbent radius near pterostigma, and shape of head, it is allied to *Chaetopteryx*, differing from it in not having hairs on wing-membrane (just as *Psilopteryx*); however, it differs from both these genera in the spur formula. It may be a *Psilopteryx* when these genera are based on more natural characters.

Family RHYACOPHILIDÆ.

Rhyacophila stigmatica n. sp.—Black; head with sparse black hair; antennæ faintly annulate; legs pale yellow, a dark mark on tips of tibiæ and on tips of tarsal articles, much more distinct in male, and most distinct on the anterior legs, absent in hind legs of female; spurs yellow. Wings black, more or less guttate with pale yellowish, in male heavily marked, in female with few spots and these chiefly at margins; a larger yellow spot near anal angle; pterostigma darker than elsewhere, in hind wings very dark and prominent, especially in males; the apical part of hind wings infuscated, veins blackish. Length to tip of wings 11 mm.

Specimens come from Las Vegas, July 10th, and Beulah, July 27th (Cockerell); also from Colorado. The female, which is but little marked, looks like *R. pacifica*, but the wings, especially the hind pair, are not near so dark.

Glossosoma parvula n. sp.—Dark brown; head clothed with white hair; posterior warts small, transverse; palpi dark; antennæ pale yellowish, darker toward tip; thorax with white hair; abdomen dark brown; legs pale yellowish, with brown spurs. Wings rather sparsely clothed with black and golden hairs, the basal half mostly golden; a whitish spot at end of thyridial cell; veins and apical fringe dark brown; venation as usual; fifth apical cell reaches as far back

as the third, and farther back than the next fork behind. Hind wings dusky, with dark fringe. The ventral process of abdomen equally broad throughout; the apical process rather small. Expanse 11 mm.

Three specimens from Pecos, August 10th (Cockerell).

Glossosoma ventralis n. sp.—Dark brown; head clothed with white hairs, posterior warts transverse, a small round wart just within each ocellus; palpi dark; antennæ pale yellowish, darker toward tip; thorax with white hair; legs pale yellowish, spurs brown; abdomen dark brown. Wings sparsely clothed with black and yellowish hairs, mostly black; a whitish spot at apex of thyridial cell, and a yellowish spot at anal angle; apical fringe and venation dark; fifth apical cell not as far back as the third, but as far as next fork behind. Hind wings dusky, veins and fringe dark, pterostigma brown. Ventral process of abdomen broader at tip than base, broader than in *G. parvula*, and the apical process is larger than in that species. Expanse 15 mm.

One specimen from East Las Vegas, July (Cockerell). There is also a female *Glossosoma* from the White Mts., August 9th, Rio Ruidoso, 6500 feet (Townsend), of the same size as *G. ventralis*, but I think it belongs to another species, for the wings seem more acute at tips.

Agapetus sp.

One specimen from Pecos, August 27th (Cockerell). It looks much like the eastern *A. obscura* Walk., but is probably different.

Family SERICOSTOMATIDÆ.

Helicopsyche sp.

Larval cases of this genus were taken from Gallinas Canyon.

Family HYDROPTILIDÆ.

Hydroptila sp.

A pretty spotted species of this genus comes from Pecos, June 20th, at light (Cockerell).

Family HYDROPSYCHIDÆ.

Hydropsyche scalaris Hagen.

Several specimens of this species, identical with eastern specimens, come from Pecos, August 10–14 (at light), and from Santa Fé, August (Cockerell).

Hydropsyche divisa Banks.

One specimen from Roswell, August 22d (at light). Previously known only from Arizona.

Hydropsyche novamexicana n. sp.—Head brown, clothed with white hairs and erect black bristles from posterior warts; the latter are large and transverse; eyes of male not large, wide apart. Antennæ pale, with white hairs, spirally annulate with black; legs pale, with whitish hair; spurs yellowish; thorax brown, clothed with white hairs; abdomen pale yellowish, with whitish hair. Wings hyaline, with yellowish hair, densely irrorate with dark brown, most heavily beyond anastomosis, pterostigma dark. Vein closing discal cell comes close to base of lower fork some distance from upper fork. Apical fringe alternately black and yellowish. Male claspers broad at tip and bifid. Length 10 mm.

Males from Roswell, August 21st, and apparently the same from Embudo, September 25th, at light (Cockerell).

Hydropsyche sp.

Two specimens from Roswell, August 22d, at light (Cockerell), represent another species, probably undescribed.

Family LEPTOCERIDÆ.

Leptocella gracilis n. sp.—Pale yellowish, short and sparse hair on front of head and basal joints of antennæ; thorax above with long dense hair, antennæ dark, the joints on basal one-third are pale on bases, fully twice as long as wings; palpi with short, rather sparse white hair; legs yellowish, the hind tibia with a row of long white hairs below on basal portion, spurs 0-2-2, quite short. Anterior wings sparsely clothed with yellowish hair; venation dark toward tip of wings, fringe on outer margin mostly black; hind wings pale greyish, with pale venation and fringe. Structure similar to *L. exquisita*, but the wings more slender and more pointed at tips; the basal joints of antennæ very large and contiguous; the venation similar to that species, but the discal cells longer, and the fifth apical cell longer pedicellate. Length to tip of wings 15 mm.

One male from Gallinas Canyon, July 30th (Osler).

EXPLANATION OF PLATE I.

Fig. 1. *Leptocella gracilis*, male genitalia.

" 2. *Dicosmæcus maculatus*, wing.

" 3. *Psilopteryx brevipennis*.

" 4. *Dicosmæcus maculatus*, tip of abdomen.

" 5. *Chloroperla 5-punctata*, tip of venter.

" 6. *Nemoura coloradensis*, male.

" 7. *Rhyacophila coloradensis*, tip of abdomen.

" 8. *Chloroperla pallidula*, tip of female venter.

" 9. *Acrouenria nigrita*, tip of female venter.

" 10. *Brachynemurus elongatus*, tip of abdomen.

" 11. *Nemoura coloradensis*, female.

" 12. *Hydropsyche novamexicana*, genitalia.

" 13. *Glossosoma parvula*, ventral plate, genitalia.

" 14. *Glossoma ventralis*, ventral plate, genitalia.